

## **IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims**

Claims 1-7 (canceled)

Claim 8 (currently amended): A gas mixture for use as an oxidizer mixture in a gas turbine compressor and combustor, the mixture comprising in combination:

a reactant portion;

a diluent portion mixed with said reactant portion;

said diluent portion including a set of diluent constituent chemical species;

said reactant portion including a set of reactant constituent chemical species;

said reactant portion able to react chemically with ~~the fuel~~ a fuel to produce a set of product constituent chemical species; and

said set of product constituent chemical species and said set of diluent constituent chemical species having more species in common than species that are distinct between said set of diluent constituent chemical species and said set of product constituent chemical species.

Claim 9 (original): The mixture of Claim 8 wherein said set of diluent constituent chemical species and said set of product constituent chemical species are substantially similar.

Claim 10 (original): The mixture of Claim 9 wherein relative amounts of constituent chemical species within said set of diluent constituent chemical species are similar to relative amounts of product constituent chemical species within said set of product constituent chemical species.

Claim 11 (original): The mixture of Claim 10 wherein said set of product constituent chemical species includes carbon dioxide and water with carbon dioxide forming between about fifty percent and about sixty percent of said set of product

constituent chemical species by weight and said water forming between about forty percent and about fifty percent of said set of product constituent chemical species by weight, and wherein said set of diluent constituent chemical species includes carbon dioxide and water with carbon dioxide forming between about fifty percent and about sixty percent by weight of said set of diluent constituent chemical species and said water forming between about forty percent and about fifty percent by weight of said set of diluent constituent chemical species.

Claim 12 (original): The mixture of Claim 11 wherein said set of product constituent chemical species includes about fifty-five percent carbon dioxide by weight and about forty-five percent water by weight, and wherein said set of diluent constituent chemical species includes about fifty-five percent carbon dioxide by weight and about forty-five percent water by weight.

Claim 13 (original): The mixture of Claim 8 wherein said reactant portion includes at least one oxygen containing species.

Claim 14 (original): The mixture of Claim 13 wherein said reactant portion includes gaseous oxygen molecules ( $O_2$ ).

Claim 15 (original): The mixture of Claim 14 wherein said reactant portion is substantially entirely gaseous molecular oxygen ( $O_2$ ).

Claim 16 (original): The mixture of Claim 8 wherein said fuel includes hydrogen and said set of product constituent chemical species includes water.

Claim 17 (original): The mixture of Claim 16 wherein said fuel includes a hydrocarbon therein and wherein said set of product constituent chemical species includes water and carbon dioxide.

Claim 18 (original): The mixture of Claim 17 wherein said fuel includes methane.

Claim 19 (original): The mixture of Claim 18 wherein said reactant portion is substantially entirely gaseous molecular oxygen ( $O_2$ ).

Claims 20-23 (canceled)